Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg

Manual of Instruction

COURSE 11

INCREASING MUTTON, LAMB, AND WOOL PRODUCTION

Rural War Production Training Program

Bldg.

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Prepared under the authority of the State Board for Vocational Education by the Department of Rural Education, The Pennsylvania State College

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PREFACE

Course 11, Increasing Mutton, Lamb, and Wool Production, is one of a series of courses which have been prepared in the "Food for Victory" program. The objective has been to set forth in brief form the phases of sheep husbandry considered pertinent to the immediate problem of Increasing Mutton, Lamb, and Wool Production in Pennsylvania.

This manual is organized into five sections:

I. SUGGESTED COURSE CALENDAR
II. INTRODUCTION
III. SUGGESTED LESSON OUTLINES
IV. SUGGESTED REFERENCE MATERIAL
    Books (A)
    Bulletins and Circulars (B)
    Visual Aids (C)
V. SUGGESTED APPROVED PRACTICES WHICH SHOULD DEVELOP FROM THE COURSE

The manual was prepared by Russell B. Dickerson, Itinerant Teacher-Trainer, Specialist in Young and Adult Farmer Instruction, Department of Rural Education, The Pennsylvania State College. The preparation was directed by H. C. Fetterolf, Chief, Agricultural Education, State Department of Public Instruction; and Henry S. Brunner, Head, Department of Rural Education, The Pennsylvania State College.

Special recognition is given to Dr. William L. Henning, of the Department of Animal Husbandry, The Pennsylvania State College, for invaluable assistance and guidance in setting up the suggested lesson outlines and in deciding upon the most current references pertinent to "Increasing Mutton, Lamb, and Wool Production."

I. SUGGESTED COURSE CALENDAR

Lesson Number	Name of Job	Date of Meeting
1	The Need for Increased Sheep Production	
2	Selecting Breeding Stock and Establishing the Farm Flock	
3	Fall and Winter Management of the Farm Flock	
4	Growing the Lambs for Market	
5	Spring and Summer Management of the Farm Flock	
6	Shearing, Storing, and Marketing the Wool Clip	
7	Controlling Parasites and Diseases of Sheep	
8	Providing Buildings and Equipment for Sheep	
9	Marketing Mutton and Lambs	
10	Slaughtering, Cutting, and Curing Mutton and Lambs on the Farm	

II. INTRODUCTION

This manual was prepared as a guide to teachers and supervisors in conducting instruction with young and adult farmers in the OSYA "Food for Victory" program. It is designed to facilitate more effective preparation by the teachers undertaking to meet the emergency need through commodity courses.

The ten (10) suggested lesson topics or jobs were selected after careful analysis of the whole field of sheep husbandry, in conference with Dr. William L. Henning.

In many instances jobs other than the ten included herein will be considered important enough in certain sections of the commonwealth to be included along with, or instead of, some of those listed. It is expected also that more than one meeting will be necessary to give satisfactory instruction in some jobs.

The aims and the problems for study and discussion set up in each of the ten lesson outlines are considered applicable to the respective jobs but they are by no means considered all-inclusive. If any or all of the suggested problems for study and discussion are incorporated into a similar course of study the suggested references will be found helpful to the busy teacher. They are offered for the express purpose of bringing teacher efficiency to its best.

The reference materials suggested on pp. 18-19 are considered pertinent to the immediate problem of Increasing Mutton, Lamb, and Wool Production. It is advised that at least one copy of each should be available for easy reference. It is assumed that a variety of references that are pertinent to Increasing Mutton, Lamb, and Wool Production, are already on hand in most schools. They will probably include texts, bulletins, charts, film strips and others, and they may furnish a large part of the reference material needed. It is imporatant however, to use the most current references for approved practices in meeting emergency problems. The bulletins of The Pennsylvania Experiment Station are prepared for Pennsylvania conditions and they generally are the most reliable sources available.

For the convenience of the teacher, the suggested reference materials on pp. 18-19 are given by key designation as follows: Books (A), Bulletins and Circulars (B), and Visual Aids (C). In preparing a lesson on any one job, the teacher will find specific references to the different problems suggested. For example, (1) if the reference is A-1, p. 7, it refers to material on page 7 of the first book listed, the material found there is considered pertinent to the problem suggested; (2) if the reference is B-3, it refers to bulletin

No. 3 on the list and implies that the content of the entire bulletin is pertinent to the problem; (3) if C-6 is given as a reference it will refer to item No. 6 in the Visual Aids list.

The suggested approved practices which should develop from the course are set forth on p. 20 as guides to the teacher. During each lesson certain conclusions should be reached which should result in the adoption of approved practices by individual farmers. These will constitute the basis for the program of follow-up instruction.

Teachers who plan to organize and conduct a course in Increasing Mutton, Lamb, and Wool Production are urged to follow the suggestions given in another manual of instruction in the series entitled, "Suggestions To Teachers And Supervisors For The Development And Conduct Of Agricultural Commodity Courses".[1]

The suggestions set forth in that manual were prepared for the purpose of aiding individuals in organizing and conducting Agricultural Commodity Courses in the Rural War Production Training program. The manual includes the following sections:

I. Objectives of Courses in the Increased Production of Farm Commodities.
II. Things to Do Before Organizing a Commodity Course.
III. Form for Surveying Out-of-School Rural and Non-rural persons.
IV. Suggested Teacher Preparation.
V. A Suggested Teaching Plan Using the Conference Procedure.
VI. The Importance of Current References.
VII. Providing Follow-up of Instruction.

[1] Rural War Production Training, State Department of Public Instruction, Harrisburg, Pa.

III. SUGGESTED LESSON OUTLINES

JOB 1. THE NEED FOR INCREASED SHEEP PRODUCTION

A. Teaching aims—To develop the ability of the farmer—

1. To evaluate the factors that influence opportunities to increase profitable sheep production in this area.
2. To adapt sheep production to home farm conditions.
3. To meet the demands for increasing quantities of mutton, lamb, and wool.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—1, 2, 3, 6, 9
2. (B)—1, 2, 3, 4, 5, 8, 14
3. (C)—1, 16

C. Suggested problems for study and discussion—

1. The sheep industry in the United States, in Pennsylvania and locally. B-1; B-2; B-3; B-4; B-5; C-1
2. Increasing quantities of shearling pelts suitable for military purposes must be produced. B-1
3. Large production of wool fabrics for Army, lend-lease, and a strong civilian demand calls for increased production of wool in 1943. B-1
4. Mutton and lamb will likewise be in great demand to offset meat shortages. B-1
5. What phases of sheep and wool production are advisable in the area? A-2, Ch. 2; A-2, pp. 30-36; A-3, pp. 281-285; A-6, Ch. 25; B-8, pp. 1-4
6. What increases in sheep production should be made on individual farms in this area as compared with increases in other livestock enterprises? A-1, pp. 235-240
7. Producing mutton and lamb for home consumption. B-14
8. Breeding problems with sheep. A-9, pp. 907-928
9. Financing the sheep enterprise.
   a. Secure credit and credit information from
      (1) The local bank
      (2) The production credit association
      (3) The farm security administration
      (4) The livestock exchange

JOB 2. SELECTING BREEDING STOCK AND ESTABLISHING THE FARM FLOCK

A. Teaching aims—To develop the ability of the farmer—

1. To select the breed best adapted to individual farming situations.
2. To select desirable breeding ewes and rams.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—1, 3, 4, 5, 6
2. (B)—6, 7, 8, 10, 11, 15
3. (C)—2, 3, 4, 18

C. Suggested problems for study and discussion—

1. Types and breeds of sheep. B-6; A-3, pp. 286-302; B-10; A-6, Ch. 19
2. Establishing the farm flock. B-7; A-4, Ch. 29; A-3, pp. 302-313; A-6, Ch. 1; A-1, Ch. 21; B-11, pp. 6-10
   a. Have enough sheep to make the enterprise worth while.
   b. Select sheep with high productive capacity.
   c. Medium-wool mutton breeds best for farm flocks.
   d. Native ewes are generally superior to westerns.
   e. A good ram is necessary.
3. Sources of ewes available to the Pennsylvania farmer. B-15; B-8, p. 5; A-4, p. 220; A-5, p. 204
4. Selecting ewes for the farm flock. A-4, pp. 220-223; A-5, pp. 205-208
5. Selecting ewes after the flock is established. A-4, p. 223; A-5, p. 208; A-6, Ch. 14
6. Selecting the ram for the farm flock. A-4, pp. 224-228; A-5, pp. 208-210

JOB 3. FALL AND WINTER MANAGEMENT OF THE FARM FLOCK

A. Teaching aims—To develop the ability of the farmer—

1. To manage the breeding flock for economical production.
2. To produce lambs, mutton, and wool efficiently.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—4, 5, 6, 7, 10
2. (B)—7, 8, 9
3. (C)—5, 6, 7

C. Suggested problems for study and discussion—

1. Conditioning the ewes for breeding.
   a. Flushing insures a shorter breeding period as well as a higher percentage of lambs. B-8, p. 6; A-4, p. 230; A-5, p. 212; A-7, p. 779
2. Conditioning the ram for breeding. B-8, p. 7; A-4, pp. 232-235; A-7, p. 780
3. Preparing the ewes for breeding. A-4, p. 231; B-7, p. 15
4. Breeding practices. A-5, p. 212; B-7, p. 15
   a. Have rams mark ewes
   b. Keep a record of the breeding periods
5. Feed and care of ewes during pregnancy. B-7, pp. 16-18; B-8, p. 7; A-4, Ch. 31; A-10, pp. 476-491; A-5, Ch. 22; A-10, p. 752
   a. Pasture is advisable in fall and early winter.
   b. Legume hays provide a good basis for winter ration.
   c. Corn silage and legume hay provide excellent feed.
   d. Grain needed before lambing.
   e. Suggested rations for pregnant ewes. A-7, Appendix Table VII, p. 1022
   f. A constant supply of clean, fresh water is essential.
   g. Shelter is necessary.
   h. Exercise is important.
6. Care of the ewe at lambing time. A-4, pp. 246-256; A-7, pp. 784-786; A-6, Ch. 11; A-5, pp. 225-228; B-7, pp. 19-22; B-8, p. 8
   a. Preparation for lambing
   b. Lambing pens. C-5

c. Providing supplies. C-6
d. Caring for the ewes.
(1) Before parturition
(2) During parturition
(3) After parturition
e. Feeding
f. Watering

7. Care of the new-born lamb. A-4, pp. 256-263; A-5, pp. 228-230; B-8, p. 10
a. Helping the lamb to nurse
b. Helping a weak lamb
c. Handling the disowned lamb
d. Handling the orphan lamb
e. Handling the chilled lamb
8. Feeding suckling ewes for milk production. B-7, p. 20; A-7, p. 786
9. Handling ailments and diseases of young lambs. A-4, pp. 263-266; B-7, p. 22
10. Castrating and docking lambs. B-9; B-8, pp. 13-15; C-7; A-6, Ch. 13
11. Producing hides and wool. A-10, pp. 492-500

JOB 4. GROWING THE LAMBS FOR MARKET

A. Teaching aims—To develop the ability of the farmer—

1. To produce high quality lambs economically.
2. To produce market lambs in accordance with market demands.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—1, 4, 6, 7, 10
2. (B)—8, 11
3. (C)

C. Suggested problems for study and discussion—

1. Rapid growth is important. A-4, p. 267; A-10; pp. 450-468; A-10; pp. 501-518
2. Feeding suckling ewes. A-4, p. 267
3. Dry lot rations. A-4, p. 269
4. Feeding the lambs. A-4, pp. 270-275
   (a) Feeding grain
   (b) Using a lamb creep
5. Feeding lambs on grass. A-4, pp. 275-282
   (a) Pastures for lambs
6. Marketing lambs at weaning time. A-4, p. 284; A-7, p. 789
7. Rations for suckling lambs. A-4, pp. 285-290
8. Finishing the lambs for market. B-8, p. 13; A-10, p. 749
9. Hot-house lamb production. A-6, Ch. 15; A-1, p. 311; A-7, p. 802; A-10, p. 751
10. Producing Easter and spring lambs. A-7, p. 803; B-11, p. 10; B-8, p. 2

JOB 5. SPRING AND SUMMER MANAGEMENT OF THE FARM FLOCK

A. Teaching aims—To develop the ability of the farmer—

1. To maintain the flock on pasture.
2. To provide the necessary shade, water, salt, supplementary feeds, and protection during the grazing season.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—4, 5, 6, 7
2. (B)—8
3. (C)—8, 9, 10, 11, 12

C. Suggested problems for study and discussion—

1. Weaning the lambs. A-4, p. 291
2. Feeding lambs after weaning. A-4, p. 292; A-6, Ch. 16
3. Caring for the ewes after the lambs are weaned.
4. Providing shelter and shade. A-4, p. 293
5. Shearing sheep. A-5, pp. 379-381; A-4, pp. 320-324; C-8; C-9
6. Dipping sheep. B-8, p. 16; A-5, pp. 247-251; C-10
7. Drenching sheep. B-8, p. 18; C-11
8. Trimming the feet. B-8, p. 16; C-12
9. Providing forage crops for the sheep. A-4, pp. 274-282; A-7, pp. 771-774

JOB 6. SHEARING, STORING, AND MARKETING THE WOOL CLIP

A. Teaching aims—To develop the ability of the farmer—

1. To shear, tie, and store wool in accordance with approved practices.
2. To market wool efficiently.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—4, 6
2. (B)—7, 8, 11
3. (C)—3, 8, 9, 13

C. Suggested problems for study and discussion—

1. A good wool crop is exceedingly important. A-6, Ch. 9; A-4, p. 314; B-8, p. 11
   a. Requisites of wool. B-11, pp. 33-39; A-4, pp. 314-318
   b. Classes and grades of wool. A-4, p. 318-320; B-11, pp. 39-41; B-8, p. 12
2. A clean, dry fleece is essential. B-11, p. 30; A-6, Ch. 8
3. Shear in a clean place. B-11, p. 31; C-8; C-9
4. Roll and tie the fleece properly. B-11, p. 31; C-13
5. Packing and storing wool. A-4, p. 325; B-11, p. 33
6. Marketing wool. A-4, pp. 326-330; B-7, p. 30; A-6, Ch. 10

JOB 7. CONTROLLING PARASITES AND DISEASES OF SHEEP

A. Teaching aims—To develop the ability of the farmer—
   1. To control internal and external parasites of sheep.
   2. To maintain the health of the flock.

B. References for this lesson—(see key list on pp. 18-19)
   1. (A)—6, 8
   2. (B)—8, 11, 12, 15, 16
   3. (C)—10, 11

C. Suggested problems for study and discussion—
   1. Preventing and controlling internal parasites. A-6, Ch. 11; A-8, pp. 859-916; B-16
      a. Stomach worms. B-8, pp. 16-18; B-11, pp. 26-28; B-12, pp. 31-38
         (1) Description and life history. B-8, pp. 16-17
         (2) Injurious action. B-8, p. 17
         (3) Preventing—pasture rotations. B-8, p. 17
         (4) Controlling—copper sulphate treatment. B-8, p. 17
            (a) Directions for drenching. B-8, p. 18; C-11
      b. Tape worms. B-11, p. 27; B-12, pp. 15-19
         (1) Control by adding nicotine sulphate (blackleaf 40) to the drenching solution for stomach worms.
      c. Grub in the head. B-11, p. 28; B-12, pp. 13-15
         (1) Prevention
      d. Maggots. B-11, p. 30
         (1) Control by removing wool from the affected region, and applying a creosote dip, turpentine, or gasoline.
      e. Nodular worm. B-8, p. 18; B-12, pp. 38-41
         (1) Prevent by culling and proper rotation of pasture
   2. Preventing and controlling external parasites. A-6, Ch. 11
      a. Ticks, lice, and scab mites. B-11, p. 29; B-12, pp. 1-12
         (1) Control by dipping. C-10
   3. Preventing and controlling diseases. A-6, Ch. 11
      a. Foot-rot. A-8, p. 70; A-8, pp. 829-833
      b. Miscellaneous diseases and ailments. A-8, pp. 839-858
         (1) Eye troubles
         (2) Pregnancy diseases. A-8, pp. 923-926
         (3) Bloat
   4. Disinfection and disinfectants. A-8, p. 11; A-8, pp. 179-187
   5. Federal and State regulatory activities in animal disease control. A-8, p. 14; A-8, pp. 209-226; B-15
   6. Fighting disease with knowledge. A-8, pp. 227-235

JOB 8. PROVIDING BUILDINGS AND EQUIPMENT FOR SHEEP

A. Teaching aims—To develop the ability of the farmer—

1. To provide adequate shelter for economical mutton, lamb, and wool production.
2. To adapt present buildings to the sheep enterprise economically.
3. To make necessary equipment out of home produced materials.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—4, 6
2. (B)—7, 13
3. (C)—5, 10, 14

C. Suggested problems for study and discussion—

1. Shelter and equipment need not be expensive. B-7, p. 11; A-6, Ch. 6
2. Important features of buildings for sheep. B-13, pp. 3-9; A-4, pp. 435-439
   a. Location
   b. Warmth, dryness, light
   c. Ventilation
   d. Arrangement of buildings
   e. Floors—earth
3. Sheep barn equipment. B-13; A-4, pp. 439-447; C-5; C-14
   a. Hay-racks or combination hay and grain racks
   b. Troughs for grain.
   c. Lambing pens are indispensable.
   d. A lamb creep is essential.
   e. Watering troughs or racks for water pails
   f. Shearing floor
   g. Shearing equipment
   h. Wool room
4. Exterior equipment for sheep. A-4, p. 447; B-13; C-10
   a. Dipping plant
   b. Fencing and hurdles
   c. Shipping crates

JOB 9. MARKETING MUTTON AND LAMBS

A. Teaching aims—To develop the ability of the farmer—

1. To interpret and intelligently utilize the information contained in the market reports.
2. To become familiar with the market classes and grades of sheep.
3. To market fat sheep effectively and economically.

B. References for this lesson—(see key list on pp. 18-19)

1. (A)—1, 2, 4, 6
2. (B)
3. (C)—15, 19, 21, 23, 24

C. Suggested problems for study and discussion—

1. Knowing when to market is essential. C-15; A-6, Ch. 17
2. What information is essential in a useful market report? A-2, Ch.15
3. The market classes of sheep. A-1, Ch. 19; A-4, Ch. 37
   a. Mutton sheep
   b. Feeder sheep
   c. Breeding sheep
4. The market grades of sheep. A-1, Ch. 19; C-21
   a. Prime or fancy
   b. Choice
   c. Good
   d. Medium
   e. Common
5. Description of classes and grades. A-2, pp. 290-311
6. The market value of the various classes. A-2, p. 313
7. Methods of marketing.
   a. Shipments by truck and rail
   b. Auctions. A-2, Ch. 10
   c. Local packers—local butchers
8. Transportation to market. A-2, Ch. 11
   a. Shrinkage. A-2, Ch. 12
   b. Losses sustained during transportation. A-2, Ch. 13

JOB 10. SLAUGHTERING, CUTTING, AND CURING MUTTON AND LAMBS ON THE FARM

A. Teaching aims—To develop the ability of the farmer—
   1. To properly kill and dress sheep and lambs
   2. To utilize approved methods of cutting and curing mutton and lamb for home use.

B. References for this lesson—(see key list on pp. 18-19)
   1. (A)—6
   2. (B)—14
   3. (C)—17, 22

C. Suggested problems for study and discussion—
   1. Proper selection of sheep for slaughtering is essential to high quality meat. A-6, pp. 185-186; B-14, pp. 1-2
      a. Flavor
      b. Factors affecting quality
   2. Tools and equipment for slaughtering and cutting. B-14, p. 2; C-17
      a. Sharp skinning knife
      b. Steel
      c. Saw
      d. Bench, box or table
      e. Device for hanging the carcass
   3. Slaughtering and dressing procedure. B-14, pp. 3-22
      a. Stunning
      b. Sticking
      c. Skinning the legs
      d. Fisting the pelt off the belly
      e. Removing the pelt
      f. Dressing the carcass
      g. Care of the internal organs
      h. Chilling the carcass
      i. Cutting the carcass
         (1) Splitting the carcass
         (2) Trimming lamb cuts
   4. Preserving the meat. B-14, pp. 22-24; C-22
      a. Freezing
      b. Curing
         (1) Brine method
         (2) Dry method
         (3) Smoking cured lamb
         (4) Storing cured lamb
      c. Canning
   5. Preserving lamb pelts. B-14, p. 24

IV. SUGGESTED REFERENCE MATERIAL

Books (A)

1. Vaughan, Types and Market Classes of Livestock. College Book Co., Columbus, Ohio, 1942
2. Dowell and Bjorka, Livestock Marketing. McGraw-Hill Book Co., Inc., N. Y., 1941
3. Davis and others, Livestock Enterprises. J. B. Lippincott Co., Phila., Pa., 1937
4. Coffey, Productive Sheep Husbandry. J. B. Lippincott Co., Phila., Pa., 1937
5. Horlacher, Sheep Production. McGraw-Hill Book Co., Inc., N. Y., 1927
6. Sheep Breeder, Inc., The Golden Hoof, Union Stock Yards, Chicago, Ill., 1936
7. Morrison, Feeds and Feeding. The Morrison Pub. Co., Ithaca, N. Y., 1937
8. U.S.D.A., Keeping Livestock Healthy. Yearbook of Agriculture, 1942
9. U.S.D.A., Yearbook of Agriculture., 1936
10. U.S.D.A., Yearbook of Agriculture., 1939

Bulletins and Circulars (B)

1. The Livestock and Wool Situation, Bu. of Agrl. Ec., U.S.D.A.
2. The Agricultural Situation, Bu. of Agrl. Ec., U.S.D.A.
3. Sheep Outlook Material for Pennsylvania, Dept. of Agrl. Ec., The P.S.C.
4. Crops and Markets, U.S.D.A.
5. Agriculture's Wartime Production Capacity, An Interbureau Committee Report, U.S.D.A.
6. Types and Breeds of Sheep. Cir. 146, The P.S.C.
7. The Sheep Enterprise. Cir. 415, Univ. of Ill., Urbana, Ill.
8. Sheep Management. Cir. 147, The P.S.C.
9. Castrating and Docking Lambs. F. B. 1134, U.S.D.A.
10. Breeds of Sheep for the Farm. F. B. 576, U.S.D.A.
11. Sheep and Wool. Leaflet 179, Mass. State College, Amherst.
12. Parasites and Parasitic Diseases of Sheep. F. B. 1330, U.S.D.A.
13. Equipment for Farm Sheep Raising. F. B. 810, U.S.D.A.
14. Lamb and Mutton On the Farm. F. B. 1807, U.S.D.A.

15. Pa. Dept. of Agr., Harrisburg. Animal Industry Regulation No. 538, Governing movement of Livestock Into and Within Pennsylvania
16. The Control of Parasitism in Sheep with Phenothiazine in a Salt Lick. Reprint from The Cornell Veterinarian, Oct. 1942, Vol. XXXII, No. 4, New York State Veterinary College, Ithaca, N. Y.

Visual Aids (C)

1. Sheep and Wool Outlook Charts, U.S.D.A.
2. Material from Sheep Breed Associations. See De Laval Diary.
3. Sheep Breed Journals—Wool Journals.
4. Breeds of Sheep. Film Strip No. 141, U.S.D.A.
5. Samples of lambing pens.
6. Samples of supplies essential for lambing time.
7. Samples of castrating and docking tools.
8. Stewart Machine Shearing Chart. Chicago Flexible Shaft Co., 5600 Roosevelt Road, Chicago, Ill.
9. Samples of shearing equipment.
10. Samples or models of dipping equipment.
11. Samples of drenching equipment.
12. Samples of hoof trimming equipment
13. Samples of wool tying material.
14. Plans, models and samples of sheep barn equipment.
15. Market News Service—Daily papers (especially Philadelphia and Pittsburgh) for livestock quotations in Lancaster and Pittsburgh markets.
16. Uses of the 1940 census data in schools, Monograph, U. S. Office of Education, Washington, D. C.
17. Slaughtering and cutting tools.
18. Pictures of ideal type ewes, rams, and lambs.
19. Lamb Cuts Chart—Armour, Cudahy, Swift, Wilson & Co., or National Livestock and Meat Board, Chicago, Ill.
20. Summary of Vitamins Required by Four-Footed Animals and Poultry, Standard Brands, Inc., 595 Madison Ave. at 57th St., N. Y.
21. Poster—U. S. Grades of Slaughter Lambs, Bu. of Mkts., U.S. D.A.
22. Preservation of Meats and Poultry in Frozen-Food Lockers. Ext. Bul. 223, Michigan State College, East Lansing, Mich.
23. List and Index of Agricultural Research Bulletins, Agrl. Research Bul. 1, Swift & Co., Chicago, Ill.
24. Wilson's Meat and By-Product Chart of Sheep, Wilson & Co., Chicago, Ill.

V. SUGGESTED APPROVED PRACTICES WHICH SHOULD DEVELOP FROM THE COURSE

1. Select the phase of mutton, lamb, and wool production best adapted to home-farm conditions.
2. Select the breed of sheep best adapted to individual farming situations.
3. For breeding ewes and rams, select desirable individuals of good breeding.
4. Condition the ewes and the rams properly to insure a maximum crop of large, healthy lambs.
5. Feed balanced rations to bred ewes to insure a crop of large healthy lambs.
6. Give close supervision and attention to the routine care of the breeding flock.
7. Creep-feed lambs for economy of gain.
8. Produce lambs in accordance with market demands.
9. Utilize home-grown grains and roughages efficiently.
10. Feed fattening sheep and lambs in accordance with their requirements.
11. During the pasture season, provide improved pasture to insure economical production of mutton, lamb, and wool.
12. Provide adequate shade, water, salt, and protection during the grazing season.
13. Shear, tie, and store wool in accordance with sound practices.
14. Recognize the demands of the market with respect to quality and condition of the wool clip.
15. Prevent and control internal and external parasites of sheep.
16. Provide adequate shelter and equipment for economical production of mutton, lamb, and wool.
17. Market fat sheep in accordance with their class and grade.
18. Use proper methods of killing and dressing sheep and lambs.
19. Cut, cure, and utilize mutton and lamb for home consumption.

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Aaron Bldg.

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